

imperialny Porter

- Gravity **19.8 BLG**
- ABV **8.7 %**
- IBU **43**
- SRM **30.2**
- Style **Robust Porter**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **75 min**
- Evaporation rate **10 %/h**
- Boil size **25.9 liter(s)**

Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **22.8 liter(s)**
- Total mash volume **30.4 liter(s)**

Steps

- Temp **66 C**, Time **50 min**
- Temp **72 C**, Time **15 min**
- Temp **78 C**, Time **10 min**

Mash step by step

- Heat up **22.8 liter(s)** of strike water to **73.7C**
- Add grains
- Keep mash **50 min** at **66C**
- Keep mash **15 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **10.7 liter(s)** of **76C** water or to achieve **25.9 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|-----------------------------|---------------|-------|-----|
| Grain | Pilzneński | 6 kg (78.9%) | 81 % | 4 |
| Grain | Pszeniczny | 0.7 kg (9.2%) | 85 % | 4 |
| Grain | Strzegom Czekoladowy 400 | 0.2 kg (2.6%) | 68 % | 400 |
| Grain | Fawcett - Pale Chocolate | 0.2 kg (2.6%) | 71 % | 600 |
| Grain | Strzegom Karmel 600 | 0.2 kg (2.6%) | 68 % | 601 |
| Grain | Carafa | 0.2 kg (2.6%) | 70 % | 664 |
| Grain | Black (Patent) Malt | 0.1 kg (1.3%) | 55 % | 985 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|---------|--------|--------|------------|
| Boil | lunga | 25 g | 60 min | 10 % |
| Boil | Marynka | 25 g | 30 min | 10 % |
| Boil | Citra | 30 g | 5 min | 12 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|-------------|-------------|-------------|---------------|-------------------|
| Safale S-04 | Ale | Slant | 150 ml | Safale |